**Amendment to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended)  A method of detecting a target in a sample comprising the target, the method comprising

(a) contacting a microarray with the sample, the microarray comprising a plurality of features disposed on a substrate, each feature comprising a first electrode disposed on the substrate, a second electrode disposed on the substrate, and a probe a pad of resistive material disposed between the first electrode and the second electrode, and a probe supported on the pad of resistive material, the substrate comprising integrated addressing circuitry in operable relation to each of the plurality of features[[,]];

(b) applying an enhancement reaction a source of metal ions to the plurality of features to result in metal deposited between the first electrode and the second electrode, said metal providing a change in an observable property of at least one of the plurality of features;

(c) providing a signal to the addressing circuitry to select one of the plurality of features to be interrogated;

(d) measuring the observable property at the selected feature[[,]];

(e) repeating steps (c) and (d) to selectively interrogate each of the plurality of features; and

(f) analyzing the results obtained from step (d) to detect the target.

2. (original)  The method of claim 1 wherein the observable property is selected from the group consisting of resistance, impedance, conductance, capacitance, current, potential, and transmission of a signal between the two electrodes.

3. (currently amended) The method of claim 1, further comprising (g) attaching a label to the target prior to applying the ~~source of metal ions~~ <u>source of metal ions</u> ~~enhancement reaction~~.

4. (original) The method of claim 3, wherein the label comprises a nanoparticle selected from the group consisting of a gold nanoparticle and a silver nanoparticle.

5. (currently amended) The method of claim 4, wherein ~~the enhancement reaction deposits metal~~ <u>applying the source of metal ions results in deposition of the metal</u> onto the nanoparticle.

6. (original) The method of claim 3, wherein the label is attached to the target via a conjugate binding pair selected from the group consisting of biotin-avidin and digoxigenin-antidigoxigenin.

7. (original) The method of claim 1, wherein a plurality of targets are detected.

8. (currently amended) A microarray comprising a plurality of features disposed on a substrate, each feature comprising a first electrode disposed on the substrate, a second electrode disposed on the substrate, ~~and~~ a <u>pad of resistive material</u> ~~probe~~ disposed between the first electrode and the second electrode, <u>and a probe supported on the pad of resistive material,</u> the substrate comprising integrated addressing circuitry in operable relation to the features, the addressing circuitry operable to select a given feature to allow interrogation of the selected feature.

9. (currently amended) The microarray according to claim 8, wherein ~~each feature further comprises a~~ <u>the</u> pad of resistive material <u>comprises a plurality of segments with fissures between the segments</u> ~~disposed between the first electrode and second electrode of the feature, the probe of the feature being supported on the pad of resistive material~~.

10. (original) The microarray according to claim 8, wherein the substrate comprises measurement circuitry in electrical communication with the addressing circuitry, the measurement circuitry being operable to interrogate the given feature selected by the addressing circuitry.

11. (currently amended) The microarray according to claim 8, wherein the substrate comprises integrated <u>circuitry for storage of data</u> storage means in operable relation to the addressing circuitry.

12. (currently amended) The microarray according to claim <u>8</u> [[9]], wherein the pad of resistive material comprises a material selected from the group consisting of carbon thin film, metal thin film, metal nitride, nichrom (NiCr), tantalum nitride (Ta$_2$N), silicon chrome, and metal oxide.

13. (original) The microarray according to claim 8, wherein the probe comprises at least one of the group consisting of polypeptides, polynucleotides, glycoproteins, polysaccharides, hormones, growth factors, peptidoglycans, ribonucleotides, deoxyribonucleotides, modified nucleosides, peptide nucleic acids, and oligomeric nucleoside phosphonates.

14. (currently amended) The microarray of claim <u>8</u> [[9]], wherein each of the plurality of features comprises a different probe.

15. (currently amended) The microarray of claim <u>8</u> [[9]], wherein the microarray comprises at least one reference feature in operable relation to the addressing circuitry.